

## CHAPTER II

# Independence for the Topogs

### *The Topographical Bureau*

When Secretary of War Peter B. Porter abolished the Board of Engineers for Internal Improvements, he elevated the Topographical Bureau to independent status within the War Department and transferred to it the responsibility previously discharged by the board. The Topographical Bureau then became the conduit for channeling engineering assistance to promising improvement projects.

To a large extent, this change represented a victory for Colonel Abert and the topographers. Through the 1820s, their prestige had grown without redounding to the benefit of the bureau. In 1830, as in 1820, it was still the least important unit of the Engineer Department. When Roberdeau died, the bureau was still an instrument depot and repository for maps, charts, and reports. Roberdeau had dutifully made available information for reference, inventoried holdings, ordered and maintained instruments, and purchased map cases and other containers. All in all, he was little more than a supply clerk. In directing the activities of the topogs, the Chief Engineer acted without Roberdeau's advice or consent.

The topogs' future looked bleak at the start of 1829, portending only more dependence on the Engineer Department. Then Roberdeau died. But when Abert took charge, he immediately began a campaign to increase his authority and break free of Engineer control. He had a twofold goal: a bigger, more important bureau independent of the Engineer Department and a separate Corps of Topographical Engineers, free of the Corps of Engineers. As justification for these changes, Abert claimed that the duties of both kinds of engineers-topographers and fortifications engineers-were so important, so extensive, and so distinct that the public interest and the welfare of both corps warranted the division. The Topographical Bureau, Abert con-

tended, should manage its own affairs and report directly to the War Department. The Chief Engineer, Colonel Charles Gratiot, disagreed. He claimed that surveys and construction were inseparable. Secretary Porter sided with Gratiot.

Gratiot did concede to Abert the position of military assistant for topographical matters. He granted Abert authority to issue orders and instructions to topogs but withheld execution by keeping to himself all Engineer Department correspondence, including that of the topogs. Without such access, Abert did not even know their stations and duties and was hardly in a position to issue orders. So Gratiot's concession meant nothing until Abert was appointed to the Board of Engineers for Internal Improvements in June 1830 as coordinator of its operations.

Abert continued to lobby for an expanded role, and Porter's successors at the War Department seemed more willing to listen. In 1830 Secretary of War John H. Eaton assured Abert that the topographers would take over all civil works, including road construction as well as rivers and harbors improvements. A year later, Eaton's replacement, Lewis Cass, indicated his support for separating the duties of the Engineers and topographers, although he was uncertain whether the topogs had enough people to do all of the nonmilitary engineering work of the Army.

Finally, in 1831, with Bernard's departure and the closing of the Board of Engineers for Internal Improvements, Abert won independence for the bureau. Acting Secretary of War Philip G. Randolph signed the order that made the bureau a separate office of the War Department. The order instructed Abert to report directly to the Secretary of War, authorized him to handle correspondence and reports from topographers and other Army officers on topographical duty, and required him to comply with requests from the Chief Engineer for surveys for fortifications. The bureau's duties, as spelled out in July 1831, were both military and civil. It was charged with reconnaissance and surveys for military purposes and for internal improvements. It kept its traditional assignment as caretaker for books, instruments, maps, and charts. It also collected and preserved topographical and geographical drawings and memoirs pertaining to its duties. Now the Topographical Bureau stood on an equal footing with the Engineer Department and other elements of the Army staff. As manager of the program left by the Board of Engineers for Internal Improvements, Abert employed 12 civil



Colonel John J. Abert (1786-1863) graduated from the Military Academy in 1811, but resigned from the Army and became a lawyer. He entered the service in 1814 as a private soldier in the District of Columbia Militia and fought in the Battle of Bladensburg in August of that year. He became a Topographical Engineer in November and served until his retirement in 1861.

engineers and 30 line officers on surveys, as well as his own 10 topogs and a few officers of the Corps of Engineers. In this job, Abert's bureau, according to historian Forest Hill, "functioned in many ways as a department of internal improvements."<sup>1</sup>

The bureau also became involved in the construction of rivers and harbors projects during the 1830s. Until 1836 the War Department assigned all rivers and harbors construction that had been authorized by Congress to the Corps of Engineers. In 1836, however, the department gave the Topographical Bureau several Lake Champlain and Great Lakes projects, among them the deepening of harbors and channels and the construction of piers and breakwaters. Fortunately for the bureau, these coincided with a drastic reduction in canal and railroad surveys.

Obviously, ten Topographical Engineers were inadequate for the size of the mission. Regardless of the ability and energy of his own people, Abert needed more professional help. His two sources of assistance were officers from other branches of the Army and civilian engineers. Through the 1830s he employed 10 to 15 civilians and 20 to 30 line officers each year. He kept civilians and officers on separate assignments to avoid friction between the groups.

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<sup>1</sup> Forest G. Hill, *Roads, Rails & Waterways: The Army Engineers and Early Transportation* (Norman: University of Oklahoma Press, 1957), p. 78.

With a perennial shortage of trained personnel, Abert needed a system of priorities on which to base allocations. He divided all surveys into three classes. Most important were those ordered by law, for which Congress usually provided a specific appropriation. Then came surveys ordered by resolutions of Congress, which were funded from annual appropriations for surveys. Surveys of national consequence or of a highly significant commercial character applied for by states or incorporated companies came last. The lowest category also included the loan of topographical officers to private enterprises, especially railroads. Abert honored such requests only when all surveys in the first two categories were already provided for. His most important customer was plainly Congress.

The bureau under Abert always sought ways to increase its surveying personnel and expand into new fields of work. In 1833 he asked Congress for money for geological investigations. Abert argued that national encouragement of a regular system of scientific investigation would stimulate commerce and science. Congress approved his proposal in 1834 and allotted \$5,000 for an expedition. Abert hired a peripatetic English geologist, George W. Featherstonhaugh, to examine mineral deposits in Arkansas Territory. Later Abert wrangled another grant from Congress and sent the Englishman on an expedition into Minnesota.

There were other new features to the work under Abert. As early as 1834, the bureau became involved in cooperative ventures with localities. In Michigan, the home state of Secretary of War Cass, the topogs did surveys of potential improvements with money provided by communities and individuals, but only when officers were free from official duties elsewhere. This arrangement yielded most of the original surveys of lake harbors in the state. In the same decade, the bureau also lent dredges and other equipment to communities willing to pay expenses and maintenance.

Abert also felt a responsibility to disseminate as widely as possible the data accumulated at the Topographical Bureau. He considered the bureau "the depository of a great fund of geographical and topographical matter," whether on surveys of dangerous coastal bars and shoals or rivers and harbors. When possible, he honored all requests for information from publishers of maps and charts. Data included "vast numbers of approxi-

mate determinations of latitudes and longitudes” taken from various reports and charts. Abert published this information, compiled for about 500 different places of observation, in the form of a 17-page table in his 1843 report as a “Catalogue of Geographical Positions determined from astronomical observations by officers of the corps of topographical engineers, and under the orders of the bureau of the corps.”

### *The Seminole War*

With so many plans for the future and his officers thoroughly absorbed in a variety of civil projects, Abert was unprepared to meet the cartographic needs of the Army during the Second Seminole War. The first war, Andrew Jackson’s campaign against the Seminoles in 1818, had employed only one of the Army’s ten topographers, Captain Hugh Young. The second war placed much greater demands on the topogs. By the end of 1836, eight of the ten topographers were in the field with various forces, performing reconnaissances, collecting topographical information, and drawing maps, although only two stayed with troops very long.

Within a few months, the topogs began to catch up with the demand for maps. In 1837 the Topographical Bureau published a “Map of the Seat of War in East Florida,” compiled by Lieutenant Washington Hood from data in the bureau’s files. Hood, who later became a captain in the Topographical Engineers, was then an infantry officer on topographical duty. Two years later Abert’s office produced a more detailed map of Florida, based on the reconnaissances of two topogs, Captain John Mackay and Lieutenant Jacob E. Blake. Topographers stayed in Florida through the 1840s, building and maintaining roads as well as collecting data, making surveys, and providing information for newer and better maps, which continued to appear through the decade.

### *Establishment of the Corps of Topographical Engineers*

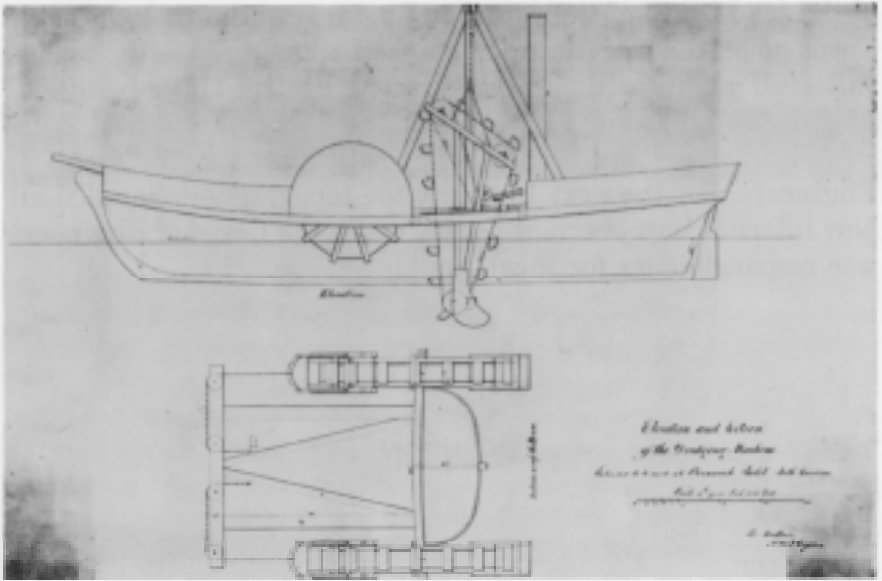
By the time of the Second Seminole War, lobbying for increased manpower and a separate corps for the topographers had gone on for at least ten years. But the war itself gave a greater boost to efforts to improve the status of the topographers than arguments by successive secretaries of war or petitions from Abert and his colleagues. The war and the expansion of the

western military frontier made plain the need for change. The Army Reorganization Act of 1838 created the Corps of Topographical Engineers, consisting of 36 officers. In addition to 1 colonel, the corps had a lieutenant colonel, 4 majors, 10 captains, and 20 lieutenants. "This law," said Abert, who was promoted to colonel in 1838 and commanded the corps from its inception until September 1861, "may be considered ... as a new creation of the corps, giving to it the requisite rank and form, and numbers." Abert now had an independent corps, free of the Corps of Engineers, to go with the bureau that had been separate from the Engineer Department since 1831.

By expanding the number of topographers and prohibiting their employment of civilian engineers, the act ended the topogs' continued dependence on private civil engineers. During much of the 1830s, Abert had had to supplement his force of ten with officers detailed from other branches of the Army and with a number of civil engineers. For instance, in 1835, of the 49 men involved in surveying activities, 13 were civil engineers and 26 were from the line of the Army. Abert always had opposed employment of outside civil engineers, many of whom he thought incompetent, or of Engineer officers, who were not very interested in surveying work. Secretary of War Joel R. Poinsett agreed with him.

By this time, the topographical officers had established their reputation in rivers and harbors work. In fact, that renown helped justify the creation of a separate corps. However, just when the topographers achieved the status they had so long pursued, an economic recession and growing disenchantment with the cost of internal improvements moved Congress to cut drastically the level of federal involvement. The same law that created the corps repealed the General Survey Act. It also limited the use of Army engineers on behalf of private interests to times when such employment did not interfere with their official duties.

That the Corps of Topographical Engineers was created just as its work on rivers and harbors surveys declined was ironic. There were several reasons for the repeal of the General Survey Act: increasing competition from railroads; the growth of rivalries between sections, states, and cities; conflict between Congress and the President; the effects of the 1837 financial panic; continued constitutional controversy; and, finally, diminishing



In 1829 George Dutton drew this sketch of a dredge used in the improvement of the harbor at Ocracoke Inlet, North Carolina. Dutton served in the Corps of Engineers for 35 years. Between his graduation from the Military Academy in 1822 and establishment of the independent Corps of Topographical Engineers, he worked on many civil projects. His most important civil assignment was as Superintending Engineer for construction of the Cumberland Road in Ohio from 1836 to 1841. This road was the first multimillion-dollar civil project of the Corps of Engineers. In 1841, Dutton's career shifted away from civil works. Colonel Totten finally yielded to pressure from Secretary of War John C. Spencer and turned over to the topogs construction of all of his remaining civil projects. From that time until his death in 1857, Dutton worked mainly on harbor defenses.

enthusiasm among even the topographical officers due to the lack of any sort of national program or planning. The surveying duties of the topogs focused increasingly on western exploration, more traditional military missions, and specific assignments authorized by Congress. Indeed, surveying activity actually increased after 1838, although it was less directly concerned with internal improvements. Moreover, the topographers continued to be involved in critical construction projects relating to navigation around the country.

While Congress imposed limitations on the efforts of the topographers, Secretary of War Poinsett rationalized what remained in an order of 1 August 1838. With the encouragement

of the leadership of the Corps of Engineers, who thought their Corps no place for civil works, Poinsett transferred to the topogs "all civil engineering works directed by the United States," whether in progress or being considered. At the same time, he moved all plans and drawings of fortifications to the Corps of Engineers. For the next 14 years, the topographers handled all new internal improvement works, while the Corps of Engineers was responsible for fortifications.